## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 29 July 2004 (29.07.2004)

PCT

(10) International Publication Number WO 2004/062943 A2

(51) International Patent Classification7:

B42D 15/00

(21) International Application Number:

PCT/GB2004/000077

(22) International Filing Date: 9 January 2004 (09.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 0300599.8

10 January 2003 (10.01.2003) GB

- (71) Applicant (for all designated States except US): DE LA RUE INTERNATIONAL LIMITED [GB/GB]; De La Rue House, Jays Close, Basingstoke, Hampshire RG22 4BS (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ISHERWOOD, Roland [GB/GB]; I Paul's Heath Cottage, Cole Henley, Whitchurch, Hampshire RG28 7QL (GB).
- (74) Agents: BUCKS, Teresa, Anne et al.; Boult Wade Tennant, Verulam Gardens, 70 Gray's Inn Road, London WC1X 8BT (GB).

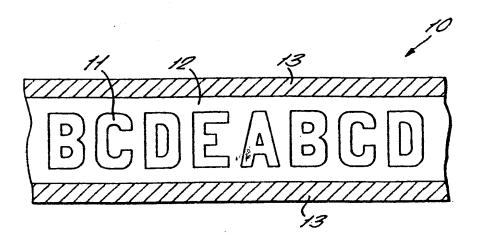
- (81) Designated States (unless otherwise indicated, for every kind-of national protection available): AE-AG-AL, AM. AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN. CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FL GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE. KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG. MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG. PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM. TN. TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM. ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH. GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK. TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Declarations under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE. AG. AL. AM. AT. AU. AZ. BA. BB. BG. BR. BW, BY, BZ. CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,

[Continued on next page]

(54) Title: IMPROVED SECURITY THREAD



(57) Abstract: The current invention relates to a security element for security substrates, such as those used for banknotes and the like, having enhanced public recognition, anti-counterfeit and detection properties. A security element comprising an elongate strip of a light transmitting polymeric substrate, said substrate being provided with a magnetic feature and a metallic design, the metallic design being provided by a combination of metal and non-metallic regions and comprising indicia, characters, patters, designs, or geometrical shapes or a combination of the aforesaid design comprising at least one repeating pattern of which one or more of the frequency, the instantaneous amplitude and/or the maximum amplitude of the pattern varies along the length of the element, said pattern being positioned relative to the magnetic feature such that it does not overlap therewith.

## WO 2004/062943 A2

EG. ES. FI. GB. GD. GE. GH. GM. HR. HU. ID. IL. IN. IS. JP. KE. KG. KP. KR. KZ. LC. LK. LR. LS. LT. LU. LV. MA. MD. MG. MK. MN. MW. MX. MZ. NA. NI. NO. NZ. OM. PG. PH. PL. PT. RO. RU. SC. SD. SE. SG. SK. SL. SY. TJ. TM. TN. TR. TT. TZ. UA. UG. UZ. VC. VN. YU. ZA. ZM. ZW. ARIPO patent (BW. GH. GM. KE. LS. MW. MZ. SD. SL. SZ. TZ. UG. ZM. ZW). Eurasian patent (AM. AZ. BY. KG. KZ. MD. RU. TJ. TM). European patent (AT. BE. BG. CH. CY. CZ. DE. DK. EE. ES. FI. FR. GB. GR. HU. IE. IT. LU. MC. NL. PT. RO. SE. SI. SK. TR). OAPI patent (BF. BJ. CF. CG. CI. CM. GA. GN. GQ. GW. ML. MR. NE. SN. TD. TG)

of inventorship (Rule 4.17(iv)) for US only

## Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.